REMARKS

Claims 1-41 are pending in the present application, with claims 1, 16 and 30 being the independent claims. Claims 8, 10, 23, 25, 37 and 39 were amended herein to provide proper antecedent basis for the claim terms "the wire format" and "the transfer." No new matter was added.

In the Official Action, dated January 24, 2005, claims 1-41 were rejected under 35 U.S.C. § 101 as allegedly directed to non-statutory subject matter, with apparent focus on claims 14 and 28 as modulated data signal claims. Claims 8 and 10 were rejected under 35 U.S.C. § 112, second paragraph, for reasons relating to antecedent basis. Claims 1, 13-16 and 28-30 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by US Patent No. 6,772,216 (Ankireddipally et al.).

Claims 2, 3, 6, 17-18, 21, 31-32 and 35 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Ankireddipally et al. in view of US Patent Publication No. 20030070158 (Lucas et al.). Claims 4, 9 and 33 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Ankireddipally et al. in view of US Patent Publication No. 20030058277 (Bowman-Amuah). Claims 5, 20 and 34 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Ankireddipally et al. in view of Lucas et al. and in further view of US Patent No. 6,341,289 (Burroughs et al.). Claims 7, 22 and 36 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Ankireddipally et al. in view of Lucas et al. and in further view of US Patent No. 6,518,979 (Spertus et al.). Claims 8, 9, 23, 24, 37 and 38 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Ankireddipally et al. in view of US Patent Publication No.

20030212904 (Randle et al.). Claims 10, 25 and 39 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Ankireddipally et al. in view of Lucas et al. and in further view of Randle et al. Claims 11, 26 and 40 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Ankireddipally et al. in view of Bowman-Amuah. Claims 12, 27 and 41 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Ankireddipally et al. in view of in view of US Patent Publication No. 20040093344 (Berger et al.). The outstanding objections and rejections are respectfully traversed based on the present amendments and below remarks.

Rejection under 35 U.S.C § 101

With respect to the rejection under 35 U.S.C. § 101, Applicants respectfully submit that the test for statutory subject matter is not whether the claims "*raise a question* as to whether the [invention] can merely be an abstract idea..." Addressing the concern notwithstanding, each of the claims is tied to a computing system, computer executable modules or computing device, and thus clearly not merely an abstract idea. *See*, e.g., State Street Bank & Trust Co. v. Signature Financial Group, 149 F.3d 1368 (Fed. Cir. 1998)

With respect to the rejection to claims 14 and 28, in particular, which each recite a "modulated data signal" in accordance with the invention, Applicants respectfully submit that there is no such exclusion for modulated data signals in the guidelines for computer-related inventions can be found at MPEP § 2106. In this regard, a modulated data signal provides a useful, concrete and tangible (and measurable) result as any other category or class of statutory subject matter. While not dispositive, for a list of recent US Patents all receiving a presumption

of validity and including similar "modulated data signal" claims, the Examiner is referred to, for instance, US Patent Nos. 6,850,233, 6,831,635, 6,828,975, 6,826,568, 6,819,325, 6,812,923, 6,760,047, 6,760,037, 6,748,395 and 6,701,329. Reconsideration and withdrawal of the rejection to claims 1-41 and to claims 14 and 28, in particular, under 35 U.S.C § 101 is respectfully requested.

Rejections under 35 U.S.C § 112

With respect to the rejection under 35 U.S.C. § 112, Applicants respectfully submit that each of claims 8, 10, 23, 25, 37 and 39, as amended, has proper antecedent basis for each of the claim recitations contained therein and thus, upon entry of the present amendment, Applicants respectfully submit that the rejection will be moot. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 112 is thus respectfully requested.

Summary of the Invention

By way of background, in an ideal distributed computing environment, a service would easily present itself to its clients, either automatically or by client request, in terms of the actions it can perform and the data it needs to send or receive in order to perform them, and according to what rules the clients need to follow to achieve the action and proper sending or receiving of the data. These presentations by services, also known as interface contracts, enable clients to classify services and communicate with them. Then, interoperability between service(s) and their client(s) is achieved by using wire format(s) derived from the interface specification(s). An ideal

language for interface description would make the mapping between an interface specification and its wire format deterministic, simple and obvious; however, at the time of Applicants' invention, no such ideal language existed and thus there was a need in the art for such an interface description language.

In view of that need, the present invention provides a Type Description Language (TDL), an extensible markup language (XML) based language, which provides an interface description that makes the mapping between an interface specification and its wire format deterministic and simple. The present invention provides seamless bridging between XML and object based views in a distributed environment. TDL leverages the duality between the type-based (objects) and XML-based views and may be used for exchanging metadata between various kinds of type (object) systems, such as Component Object Model (COM), Common Object Request Broker Architecture (CORBA), Common Language Runtime (CLR), etc. **TDL proposes a new grammar for representing the behavioral aspect of a type and illustrates that there is a <u>one to one</u> mapping from an abstract type to a schema type and vice-versa.**

<u>Ankireddipally et al.</u>

Ankireddipally et al., in contrast, relates to an application interaction protocol that is used to implement secure Internet-wide electronic commerce applications. The protocol is referred to as the Commerce Exchange Interaction Protocol (CXIP) and operates at the application level, providing a formal set of procedures to facilitate functional interoperation among application services and processes. The CXIP protocol specifies the message types that are exchanged

between applications, the semantics of these messages and the exchange order. The application interaction protocol, which is not specific to any particular functional domain and specifies interactions that are independent of transactional content, includes four component parts: message formats, message types, message exchange semantics and transportation assumptions. Data, object and method invocation requests are exchanged between applications by means of structured documents that use XML tags and that are consistent with the protocol. Messages using XML are machine-readable and can be interpreted in a domain-specific fashion. The exchange of self-descriptive XML messages facilitates document life cycle tracking.

The two unrelated passages relied upon in the Official Action for anticipation of the present invention are as follows:

- cXML defines a set of document type definitions (DTDs) for XML to describe the characteristics of non-production Maintenance, Repair, and Operations (MRO) goods and services. **5:42-45**
- Persistence service 19 has the responsibility of mapping between an XML document and the respective data store schema. **13:1-3**

Providing some additional context, persistence service 19 provides interfaces for storing information into and retrieving information from external data stores 18. **12:64-13:1**

In this regard, Applicants respectfully submit that these unrelated passages cited in the Official Action cannot be said to teach or suggest "describing the service with an extensible markup language (XML)-based Interface Description Language (IDL) that **one to one maps a type of a particular type-based system to an XML schema** and vice versa," as recited, for

instance, in claim 1, at least because there simply is no disclosure of any one to one deterministic mapping between types of any particular type-based system to an XML schema.

Similarly, claims 16 and 30 recite "a mapping mechanism for describing a service of one of a device and object in a computing system with an extensible markup language (XML)-based Interface Description Language (IDL) that **one to one maps a type of a particular type-based system to an XML schema** and vice versa."

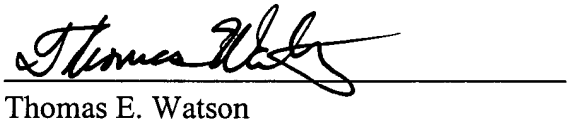
Lucas et al., Bowman-Amuah, Burroughs et al., Spertus et al., Randle et al. and Berger et al. were cited for reasons related to the dependent claims, but also fail to teach or suggest at least the above-identified features of claims 1, 16 and 30.

Claims 2-15, 17-29 and 31-41 depend from base claims 1, 16 and 30, respectively, either directly or indirectly, and are believed allowable for the same reasons. For the foregoing reasons, reconsideration and withdrawal of the rejections to claims 1-41 under 35 U.S.C. §§ 102, 103 is respectfully requested.

CONCLUSION

Applicants believe that the present Amendment is responsive to each of the points raised by the Examiner in the Office Action, and submit that Claims 1-41 of the application are in condition for allowance. Favorable consideration and passage to issue of the application at the Examiner's earliest convenience is earnestly solicited.

Date: April 25, 2005



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